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*Panax ginseng* C.A. Meyer (Araliaceae) has been traditionally used as an expensive and precious medicine in oriental countries for more than 5,000 years. Ginseng saponin isolated from the root of *Panax ginseng* have been regarded as the main effective components responsible for the pharmacological and biological activities such as antiaging effects, antidiabetic effects, anticancer effects, protection against physical and chemical stress, analgesic and antipyretic effects, effects on the central nervous system, tranquilizing action and others. Thirty kinds of ginsenosides have been so far isolated from ginseng saponin and their chemical structures have been elucidated since 1960's, among which protopanaxadiol type is 19 kinds, protopanaxatriol type 10 kinds and oleanane type, one. Since ginsenosides are generally labile under acidic conditions, ordinary acid hydrolysis is always accompanied by many side reactions, such as epimerization, hydroxylation and cyclization of side chain of the sapogenins. Especially, it is well known that C-20 glycosyl linkage of ginsenoside was hydrolysed on heating with acetic acid to give an equilibrated mixture of 20(S) and 20(R) epimers. And also, the chemical transformations of the secondary metabolites have appeared during the steaming process to prepare red ginseng, indicating demalonylation of malonyl ginsenosides, elimination of glycosyl residue at C-20 and isomerization of hydroxyl configuration at C-20. But these studies have not provided a comprehensive picture in explaining how these ginsenosides showed various pharmacological activities of ginseng though some of saponin components have received a great deal of attention for their antioxidant, anticancer, antidiabetic, immunomodulating, anticomplementary activities and so on. To meet the demand for such wide applications, studies on the non-saponin components play an important role in providing a good evidence of pharmacological and biological activities. Among the non-saponin constituents of Korean ginseng, polyacetylenes, phenols, sesquiterpenes, alkaloids, polysaccharides, oligosaccharides, oligopeptides, and aminoglycosides together with ginsenosides of terrestrial part are mainly described.